

# PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 16, 1878.

## • ORIGINAL LECTURES.

### CLINICAL LECTURE

#### ON A CASE OF KIDNEY DISEASE SECONDARY TO HEART DISEASE.

*Delivered at the Philadelphia Hospital, January 5, 1878,*

BY JAMES TYSON, M.D.,

One of the Physicians to the Hospital, and Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania.

THE patient I bring before you this morning is one who has been long in the hospital, being admitted August 1, 1877, but who has come under my care only within the past three days. He is a German, 72 years old, and is by occupation a baker. His history is defective, but this much is easily ascertained. He was able to work up to two years ago. Since then he has felt weak and easily tired and short of breath. A year ago he first observed some swelling of his lower extremities, and since then he has had more or less œdema, which has been at times excessive, but again abated. He has also during this time been off and on in bed, getting up as his dropsy subsided, and going back to bed as it became worse. I have been unable to learn whether there has ever been any abdominal effusion,—ascites,—or pleuritic,—hydrothorax. When I first saw him he was in bed, and presented, as he does now, as the only evident symptom, some œdema of the subcutaneous tissue of the thigh and of the abdominal walls, but it was not excessive. His face had a florid, wholesome look, and he appeared well nourished. I was told that he had Bright's disease; and the œdema made it probable.

Now, many of you are aware that there are three principal diseases which cause the symptom dropsy,—heart disease, liver disease, and Bright's disease of the kidney. Various circumstances determine the order of examination of these organs with a view to determining which is the one affected. The mode of onset of the dropsy, to a certain extent, suggests the organ involved. Thus, it is said that when the dropsy is due to cardiac disease the effusion makes its appearance first in the subcutaneous tissue of the extremi-

ties, particularly of the lower; when the liver is at fault, abdominal dropsy first occurs; and in renal disease the œdema is apt to appear first in the face. In the present case I was told that the patient had Bright's disease, and naturally first investigated his kidneys. I found his urine, when freshly passed, of acid reaction, without sediment appreciable to the naked eye, of low specific gravity, 1010–1012, and dark amber-hued. It was copiously albuminous, as I now show you, depositing one-seventh to one-fifth of its bulk of albumen. But on examining the fluid by the microscope for casts, I found none after the most careful searching of four slides. This surprised me; for although there is a form of uncomplicated Bright's disease—chronically contracted kidney—in which the casts are sometimes absent, yet in it the quantity of albumen is always small. Never in a case of simple Bright's disease do you find a quantity of albumen as large as is here presented, without numerous casts. I therefore returned again to my patient, and ausculted his heart, when I found an evident murmur, mitral in place and systolic in time, a murmur indicating *mitral insufficiency and regurgitation*. The rhythm of the heart was also gone, its beat irregular, and on percussion the area of its dullness was found enlarged. All the symptoms were at once explained. I had to do with a failing heart,—a heart dilated, and with insufficient mitral valves. I came at once to the conclusion that the primary disease was cardiac, and the condition of the kidneys leading to the copious albuminuria was secondary.

Now, what are my reasons for coming to this conclusion? Chiefly the facts that although there is here a copious albuminuria, there are no casts in the urine; that where heart disease is secondary to Bright's disease,—a very common occurrence,—there is first hypertrophy of the organ; and valvular disease, which is much rarer under these circumstances, comes on only in the later stages, when atheroma of the arteries has become very general and the kidney disease has so advanced that not only is there copious albuminuria, but also an abundance of casts. In Bright's disease secondary to heart disease the urine is scanty and dark-hued, instead of being pale as when the Bright's disease precedes. Finally, I might refer to the mode of onset

of the dropsy, which began here, as it usually does in cardiac disease, in the lower extremities. For these reasons I do not doubt that the heart disease preceded the lesion of the kidneys.

The next question for us to settle is, What is the lesion of the kidneys, and how is it brought about? I will answer the latter part of my question first. What is the state of the circulation in mitral insufficiency? The blood is crowded on the venous side of the vascular system; regurgitating from the left ventricle into the corresponding auricle and thence into the lungs, the latter organs become engorged, and again resist the movement from the right side of the heart, whence the valveless *venæ cavæ* receive it readily. The smaller veins of the extremities at first resist it by means of the valves with which they are provided. But the veins of the abdominal organs, including the liver and the kidneys, are without valves. They are the first, therefore, to receive the brunt of the stagnation. They become gorged with blood, and it is as though a string were tied around the renal vein, preventing the exit of the blood. What is the consequence? The connective tissue so abundantly present in the liver, and although sparsely present in the kidney, still there in sufficient quantity to become the starting-point of new formations, becomes infiltrated with *liquor sanguinis*, the natural pabulum of the tissues. Thus supplied with food, the connective-tissue corpuscles proliferate. Others are formed by the proliferation and fixation of the amœboid white corpuscles which, under the favorable circumstances afforded by a stagnated circulation, wander out in great numbers from the capillaries and small veins. These new cells are differentiated into connective-tissue fibres. The condition is that of an *interstitial nephritis*. The kidney as well as the liver, if examined at this stage, will be found hard and somewhat enlarged, dark-hued and injected. The capsule is still smooth, and strips off easily. On section, the organ is darker in color, also injected, and the cortical substance sometimes slightly increased in area. But this condition is rarely seen, and is soon substituted by another. The new connective tissue, playing its inviolable rôle, begins to contract, to compress and destroy the proper secreting structures. In thus doing, a granular appearance of the organ is produced, and

its size is reduced; it becomes very hard and smaller, the capsule strips off with difficulty, and drags with it a portion of the secreting structure, exhibiting the granular appearance more markedly: a true cirrhosis results. This may be true of both liver and kidney, but the latter organ is the first to suffer. I present for your examination a granular cirrhotic liver removed from a patient who died in my ward yesterday. Observe the granular elevations about the size of a pin's head or larger, separated by depressed rings of connective tissue. Sometimes these are much larger, as large as the head of a nail, when the liver is called *hob-nailed*. Similar is the condition of the kidney of this patient. He has a cirrhotic contracted kidney, which differs not essentially in its pathological anatomy from that of the chronically-contracted kidney or the interstitial nephritis which is primary. Here, too, casts are comparatively few, but the quantity of albumen is small. The large amount of albumen in the class of cases of which this is a type is due to the increased venous congestion of the heart disease. Albumen, which does not osmose under normal conditions, is here placed under pressure, between the ligature about the renal vein in the shape of resistance to the return of the venous blood to the heart, and the blood-pressure due to the heart's contraction. Hence it is pressed through the walls of the capillaries, and copious albuminuria results.

Now as to the *treatment* of our case. The indications are evident. We have here a dilated, weak, failing heart, unable to drive the blood forward. Its power must be increased, and we have a remedy capable of doing this in digitalis. But sufficient doses must be given, whether of the tincture, powder, or infusion. The infusion, freshly prepared, is the most reliable preparation, although much of its efficiency is due to the fact that it is given in larger doses than the other preparations. Thus, it is not uncommon to give fʒss of the infusion, which is equivalent to nearly four (3½) grains of the powder and thirty minims or sixty drops of the tincture. Yet rarely are such doses of the latter given. Less than fifteen drops of the tincture—equivalent to about one grain of the powder—is too small a dose for an adult. This much may be given every three hours if the patient is seen daily, or oftener if the case

is seen twice a day. Our patient is seen twice daily, and we will give  $\frac{3}{4}$ ij of the infusion, or nearly two grains of the powder, every two hours, pushed until the pulse is influenced. Under this treatment we shall expect to see the amount of urine increase, and the albumen diminish as well as the œdema; and to avoid complication we will order no other remedies at present.

I should perhaps state, in conclusion, that it is by no means always so easy as it appears to be in this instance to determine which of the two co-existing diseases—Bright's disease and cardiac disease—was the primary affection, characteristic symptoms of the two being so closely associated that it is impossible to say which preceded. But, whichever preceded, the addition of the second produces a condition very much more serious, and symptoms very much more distressing, than either alone would produce.

## ORIGINAL COMMUNICATIONS.

### REPORT OF CASES OCCURRING IN THE PENNSYLVANIA HOSPITAL.

SERVICE OF DR. T. G. MORTON.

By W. C. Cox, M.D., Surgeon to the Out Department.

(Continued from page 201.)

**CASE III.—Death from Rupture of Aneurism of Innominate and Subclavian Arteries; Post-Mortem.**—E. F., male, aged 48, colored, admitted June 11, 1877. Ten days before, his attention was directed to a swelling on the right side of his neck, just above the clavicle; about the same time he experienced diminished sensation in the right arm, together with a numbness and sense of cold in that part. There was no swelling of the arm. Mother and one brother died of phthisis; family otherwise healthy. Had syphilis nine years ago. In October, 1876, while lifting logs, strained his right shoulder and neck, and from that time complained of severe pain in the latter region, and where afterwards the aneurismal tumor was developed, which at the time of admission measured five and a half by eight inches in diameter. There was marked thrill with very distinct pulsation; the radial pulse was readily felt. Patient's condition presented but little change until August 8, when the pulse at the wrist could no longer be detected. The tumor had, however, been slowly increasing in size, and the patient had been suffering a great deal from dyspnoea. From this period, although the growth increased much more rapidly, at the same time he was relieved of the pain, from the fact that the tissues gave way over the

clavicle, and so the pressure from the trachea and thorax was removed (see figure). On October 22 the skin over the growth became exceedingly thin, and on the 28th blood began to ooze drop by drop from the summit of the tumor until the afternoon of the 30th, when the skin at that place gave way, and a stream of blood was projected three feet above the patient upon the wall. Death ensued almost instantly. The patient, on admission, was placed in bed, and ten-grain doses of potass. iodide given, which were rapidly increased to seventy-five grains daily. Morphia was also administered by mouth and hypodermically, and digitalis and aconite were given to con-



trol the action of the heart. At no time was there an opportunity offered for any operative treatment, for the aneurism was thought to involve at least a part of the innominate, and probably the carotid and subclavian. During the three months prior to his death, by the absolute rest in bed, a careful attention to diet, and occasional anodynes, the patient was made comparatively comfortable.

**Post-Mortem.** Notes by Dr. M. Longstreth. —Ascending aorta was thickened, rigid and roughened. The innominate for an inch, same as aorta, but there entered the larger aneurismal sac, which was composed of the remainder of the innominate and upper wall of first portion of subclavian. The tumor had dilated upwards and backwards, pressing the carotid artery against the spine, and entirely destroyed three-quarters of an inch of its calibre; it was imbedded in the aneurism walls as a thickened ridge. The tumor was pear-shaped, base at the lowest point and tapering upwards; was four inches from its summit to the innominate entrance; five inches wide; three inches in its antero-posterior diameter. The inferior and posterior walls of the sac were thick, had the same general appearance as aorta and innominate; the anterior wall was much thinner, except at its

point of contact with the sternal end of clavicle, where a mass of firm, fibrous tissue was found. In fact, the anterior wall was composed mainly of laminated clot and the skin, although on section a very delicate sac wall could be detected except at the point of rupture. Near the summit were two very thin spots, and a little below them a ragged opening, from which the hemorrhage took place, and which was filled with recent clot. On the lower outer surface of the aneurism the continuation of the innominate into the subclavian could be distinctly seen as a rounded trunk. The subclavian, after leaving the sac, was about the size of the innominate, and continued that size until its entrance to the smaller sac, which was composed of the lower wall of the subclavian, which had given way at the junction of the second and third portions of the artery for half an inch. This second aneurism was large enough to contain a hen's egg, and extended down behind the first rib to the second. Costal pleura was separated, and the right pleural sac had a low rounded prominence on its anterior surface. The aneurism extended upwards behind the clavicle, and was in contact with the wall of the larger sac over a space as large as a half-dollar. The terminal and mediate portions of the subclavian were normal. The nerve-trunks were found on the posterior surface of the dilatation. The cavity of the smaller aneurism was filled with layers of laminated clot and with a soft black clot. The internal mammary artery passed to the inner side of the smaller aneurism and appeared normal. No traces could be found of the other branches of the subclavian. The clavicle had been forced upwards and forwards, and its upper surface was eroded for one and a half inches. The first rib at upper and inner border was roughened, and on its under surface was a semicircular excavation about one-eighth inch in depth, and extending three-quarters of an inch across the bone.

*Case IV.—Empyema; Paracentesis Thoracis; Recovery; New Chest Trocar for introducing Drainage-Tube.*—J. F., male, aged 34, was admitted August 28, 1877, with a penetrating wound of the right side of the chest, the knife entering a short distance above the nipple, between the second and third ribs. No external hemorrhage or bloody expectoration followed, but there was severe pain and considerable prostration; marked dulness of the lower part of the chest came on at once from internal hemorrhage. Some weeks after this, pleurisy, with great effusion, occurred; the right side became more than half filled with fluid. Patient suffered greatly now from dyspnoea and exhausting cough. Symptoms increased, and on October 22 Dr. Morton tapped the chest with an ordinary trocar, and drew off one hundred and ninety-two ounces of offensive pus, which gave immense relief. Pus again soon collected, and

Dr. Morton inserted a drainage-tube through a double opening by means of a new trocar which he devised for the purpose (see figure).



The instrument was so constructed that it could be made to enter the chest at its lowest point anteriorly, and then by curving it backward could be brought out of the chest at a point far back and over the next rib above, so as to insure a constant drain from the chest when the patient assumes a recumbent or a sitting posture. After the instrument was introduced the trocar was removed, and the drainage-tube was passed through the canula; the latter was then removed, and the tube being held in position its two ends were tied together in front. The patient was greatly relieved of the dyspnoea at once, and has gradually improved in health; the lung is expanding.

#### OPERATION FOR THE CURE OF FISTULA IN ANO BY MEANS OF THE ELASTIC LIGATURE.

BY J. L. SUESSEROTT, M.D.

IN the report of the Schuylkill County Medical Society, published in the Transactions of the Medical Society of the State of Pennsylvania for the year 1877, Dr. John T. Carpenter, of Pottsville, records a case that was treated in October, 1874, with the elastic ligature with satisfactory results, and supposes it to have been among the earliest in this country. I desire to bring the following case to notice, not only to add my testimony to the success of the treatment, but also to record the fact that the operation was performed March 17, 1874. And in giving this endorsement, I am not ignorant of the



fact that no less a personage than John Eric Erichsen, F.R.S., F.R.C.S., is credited with having said that "a resort to the elastic ligature was a retrogression to the barbarities of the mediæval ages." But having had occasion to use it in various operations, since the case to be referred to presently, with uniformly satisfactory results, I think it well to keep it before the profession, and let it determine whether the Surgeon Extraordinary to Her Majesty the Queen, etc., is not mistaken, and that his conclusion was hastily drawn.

Hannah H., aged about 20 years, had suffered for some years with hemorrhoids, which resulted in two anal fistulas, one on either side of the outlet, and both including the greater portion of the sphincter. The one on the right side was situated farthest from the anal orifice, and extended about three and a half inches alongside of the rectum. At the date above mentioned, after having secured a good state of anæsthesia with chloroform, I introduced, by means of an eyed probe, into each track, a strong ligature composed of the elastic cord so commonly used by ladies about their dresses and also by milliners in their work. They were both drawn as tightly as could be conveniently done, and the patient was placed under the influence of a powerful anodyne. The one on the left side cut its way through in seven or eight days, the other one in about two weeks. Both fissures healed promptly, and the patient, who has since been the mother of one child, considers herself perfectly sound. No application was used to favor the healing of the wounds, and the suffering, which for the first few days was controlled by the anodyne, was hardly worth mentioning.

CHAMBERSBURG, January 31, 1878.

#### REPORT OF A CASE OF RUPTURE OF THE DUCTUS COMMUNIS CHOLEDOCHUS FROM THE PASSAGE OF A GALL-STONE.

BY E. L. B. GODFREY, M.D.,  
Camden, N.J.

THE duration and intensity of the pain induced by the passage of a gall-stone generally depend upon the size and shape of the stone. As a general rule, no evil results from the passage, beyond the pain occasioned. Cases, however, are occasionally met with which furnish an exception to this rule. When the stone is unusually large and irregular as to its shape, or the canal of the common duct partially obliterated from previous inflammation, impaction of the stone, distention of the gall-

ducts, cholæmia, softening of the liver, ulceration and perforation of the duct leading to peritonitis, or sudden rupture of the duct and internal hemorrhage, may follow, and produce the most serious consequences. A case of rupture of the common gall-duct from the passage of a gall-stone has been reported by Prof. Hartshorne. In the case I report, death occurred, from the rupture of the common biliary duct and internal hemorrhage, twelve hours from the commencement of an attack of hepatic colic.

The patient was a young man, 28 years of age, who had never had an attack of hepatic colic. The attack began at nine o'clock in the evening, while the patient was on the street, and was so violent in its onset, and the pain so intense, that the patient was unable to walk, and was obliged to be taken to his home in a carriage. I saw him in about a half-hour after he had been taken home. The suffering at that time was extreme, and from the suddenness of the attack, the character, constancy, intensity, and locality of the pain, and the tenderness over the right hypochondriac region, I concluded that the patient was passing a gall-stone. Vomiting, which is usually a prominent symptom, was wanting. A hypodermic injection of a half-grain of morphia, with the internal administration of fifteen grains of chloral, and the application of hot poultices over the seat of pain, only moderated the suffering for a short time. These remedies were repeated as often and given in as large doses as I thought compatible with safety, and, failing to relieve the pain, ether was administered. The patient was kept under the influence of ether from 11.30 until 3 A.M. The effects of the ether were, however, allowed to pass off every fifteen or twenty minutes, in order to ascertain the progress of the passage of the stone. At 3 A.M. the ether was again removed, and the patient, in answer to questions, stated that he was free from pain, and would like to sleep. There was at that time very decided tenderness over the right hypochondriac region, and considerable prostration. Milk-punch was administered, and the patient slept well. The prostration, however, was no more marked than would naturally result from the severity and duration of the attack and the effects of the ether. Otherwise the patient was in a good condition, perfectly conscious, with a good pulse and good respiration. There was nothing to indicate that he had not successfully passed through the attack. I left the patient at that time, and did not see him until 8 A.M., five hours after the passage of the stone. When I saw him (at 8 A.M.) the unmistakable signs of approaching dissolution were markedly apparent. The patient was pulseless, respirations rapid, skin cold and sweaty, extremities decidedly cold, face pinched in its expression and of

extreme pallor, while his mind was impressed with the idea of impending danger. Every indication was promptly met, and stimulants were freely administered, but were of no avail. This condition came on so gradually that it failed to attract the attention of the patient's family until a short time previous to my visit. One hour from the time of my visit the patient died.

After death the conjunctivæ and the skin showed decided jaundice.

Thus the attack was six hours in its duration, four and a half of which the patient was under the influence of ether. Six hours after the passage of the stone the patient died, just twelve hours from the commencement of the attack.

Drs. Mecray and Melcher very kindly assisted me in making the post-mortem examination. On opening the abdomen we found the results of an excessive hemorrhage. The right and upper portions of the abdominal cavity were filled with blood. Knowing from the history of the case and the condition of the patient at the termination of the attack that the hemorrhage followed the passage of the gall-stone, we proceeded with our examination in that region. After exposing and examining the structures and failing to find the source of the hemorrhage, we tied the duodenum above and below the entrance of the common biliary duct, cut the duct in its middle, and inflated with a quill the end towards the gall-bladder, and found that air passed readily into the gall-bladder; then introducing the quill into the other end and inflating, we found that air escaped from an opening at the junction of the common biliary duct with the duodenum. Examination showed the duct to be ruptured at that point in the direction of its length, the rupture being about three lines in length, and extending from the circular fibres at the terminal extremity of the duct. The duct being smallest at that point arrested the progress of the stone, and the stone thus arrested was forced through the walls of the duct into the abdominal cavity. The liver was decidedly pale in its appearance; the gall-bladder contained but a small quantity of bile, and two gall-stones. The stomach, intestines, spleen, and abdominal organs were in a healthy state. It is difficult to account for the excessive hemorrhage. It unquestionably commenced at the time of the escape of the stone from the common gall-duct, lasted during the period of six

hours after the escape, and finally caused death. It is hardly possible that such an excessive hemorrhage could take place from the seat of rupture in the wall of the common biliary duct. It is possible, however, that the stone when forced from the common gall-duct cut the portal vein and thus gave rise to the hemorrhage. This view is based upon the depleted condition of the liver, the venous character of the blood, and the extent of the hemorrhage.

#### A CASE OF GESTATION AFTER AMPUTATION OF THE CERVIX UTERI.

BY D. BENJAMIN, M.D.

ON the 17th of June, 1876, I was consulted by Mrs. — (age about 39 years; married; mother of several children) for disease of the uterus. On making an examination I found a tumor about the size of a hen's egg protruding between the labia. On further examination the tumor proved to be a hypertrophied cervix, the whole womb measuring over five inches in length. The patient had borne no children for about eight years. Congestion and irritation of the parts were reduced by local treatment, and, in consultation with Drs. Ridge and Goodell, on the 30th of June, an operation was determined upon. On the 30th of August Drs. Ridge, West, and myself proceeded to operate. Ether was administered; a double ligature was then passed through the cervix, one-fourth of an inch below vaginal insertion, and tied loosely both ways so as to enable us to control hemorrhage. The wire loop of the *écraseur* was adjusted about one-fourth of an inch below the ligature, and the hypertrophied cervix removed. The ligature proved very satisfactory in arresting hemorrhage. The piece of cervix removed was fully one and a half inches in length.

No untoward symptoms occurred; the patient was going about the house in three weeks' time, and health, which had so long deserted her, returned.

On the 26th of January, 1877, she ceased to menstruate. On the 25th of March I found a polypus about half an inch long protruding from the os uteri. This I twisted off with the polypus forceps. The uterus was gravid, and gestation continued. The patient became plethoric, and was bled by me in May, and by Dr. Ridge in August. Nothing further of interest occurred until the patient fell in labor, on the 3d of October. Dr. Ridge was in attendance. The os was somewhat rigid, but dilated in about eight hours, and a fine male child, over the average size, was born. The mother is now perfectly healthy.

## NOTES OF HOSPITAL PRACTICE.

## PENNSYLVANIA HOSPITAL.

CLINIC OF DR R. J. LEVIS,

Surgeon to the Pennsylvania and Jefferson Medical College Hospitals.

Reported for the *Medical Times*.

## FRACTURE OF THE FIBULA.

THIS boy whom I bring before you has fractured his fibula. Fracture of the fibula may be caused by direct or indirect violence; indirect violence by causing extreme eversion of the foot, and direct violence as from the kick of a heavy boot. The majority of cases are caused by extreme eversion of the foot, the break occurring a short distance above the malleolus. Fractures of the fibula are not liable to present great displacement, and are apt to be mistaken for a simple sprain or strain of the ankle-joint. The differential diagnosis between fracture near the joint and a simple sprain becomes, therefore, a matter of great importance, and I shall direct most of my remarks this morning to this subject. The fractures of the fibula which are likely to be mistaken for a sprain are those occurring in the lower third. The eversion is produced by the force causing the fracture being no longer resisted by the fibula. This form of fracture will throw the malleolus outward while the top of the lower fragment is tilted inward. If the malleolus is displaced outward, it allows of a greater amount of lateral motion in the joint. In examining with regard to this point, I should take hold of the foot firmly, and if it were a case of simple strain I should be able to produce no lateral motion, but if it were a case of fracture I could slide it outward, and feel the impact of the astragalus first against one malleolus and then against the other. Another point I wish to impress upon you. If there be great swelling, or if the patient is a fat person, you may not be able to detect the displacement in case of fracture. This obstacle I have overcome in this manner. I make out a fracture by grasping the fibula at a point some distance above the supposed fracture, viz., up near the knee, and lifting the fibula as it were. If it is broken below, I can tilt the bone there and produce pain at the seat of the fracture, though my hand is grasping the bone far above.

In a great many cases the displacement

is very slight, and rest only is required to bring about a cure. In this case, you see, the indirect violence has induced violent eversion. There is an outward tendency in the direction of the foot, so that in this fracture the malleolus is tilted outward and its upper portion inward. The interosseous ligament and the dense structures about the bones forming the joint, keep the displacement from being very great. These fractures are, as I have said, often best treated by rest only. Where the displacement is enough to give the leg a curved appearance, a splint is to be adjusted along the inside of the limb, and between the splint and the limb is placed a pad, which is to be used as a fulcrum to the splint. The roller is then applied over the splint and limb, binding the foot below and the leg above the seat of fracture firmly to the splint.

## REFRACTURE FOR DEFORMITY AFTER FRACTURE OF FOREARM.

Here is a deformity following a fracture of the radius and ulna near the middle. There has been here imperfect apposition and consequent angular deformity of the ends of the fractured bones, which I purpose rectifying. This boy received the injury about three months ago, so that the callus should not as yet be so very hard. Sometimes we break the bones over again, even when the union is very complete. Sometimes, again, we drill the bone at the seat of the fracture, using for this purpose these bone drills. They are entered at a single point, and are made to traverse the bone in different directions. Sometimes, again, the drills are entered, but no attempt to straighten is made at the time, and the bones are allowed to remain until inflammation ensues. It is known that in a state of inflammation bone is softer and more easily manipulated than it is in the natural state. In rebreaking the thigh-bones and other strong bones, this is constantly resorted to. I have thus frequently broken the femur and the humerus. We desire in these cases to rebreak at the point where the fracture occurred. I bind two board splints firmly on the side of the limb, corresponding to the convexity of the angle, so that their approximated ends may meet directly over the fracture. The object is to obtain leverage, and to avoid, if possible, breaking at a point other than the seat of fracture. If it does not exceed three months' duration we may be able to rectify

this malposition by manipulating without any apparatus,—as I now produce a little motion by bending the limb in the direction opposite to the concavity of the angle. I want next to flex the fingers and put the muscles of the forearm in an easy position. I have by this means rectified the position without any difficulty after three months. Bones do not unite, after fracture, so soon as the books say; at least I have not found them to do so in my experience. Bond's splint shall be applied, with appropriate compresses, and the attempt made to give this boy a straight arm. [After a time the Bond's splint was removed, and dorsal and palmar straight splints applied with the hand semi-pronated, because the radius and ulna would then be parallel and less likely to become united by callus in the interosseous space. A third, very narrow splint was also placed along the ulna, to prevent deformity outwards. The boy was finally discharged with the deformity improved.]

#### PARTIAL AMPUTATION OF THE HAND.

This is a young man who is suffering from a gunshot injury of the left hand, caused by the bursting of a gun, which will necessitate the amputation of some part of the hand. I find that my assistant, before etherizing the patient, has been thoughtful enough to ask if he wore artificial teeth. This is a wise precaution, for death has been caused by artificial teeth becoming entangled in the fauces during the administration of an anæsthetic. Here is a right hand which has been shattered by the bursting of a gun, and, what is more than that, the most important portion of the hand, the thumb and the index finger, has received the greatest amount of injury. The metacarpal bone of the index finger is shattered, and must be sacrificed. I sometimes succeed in saving some or all of the integument in these cases, by dissecting off all the skin and afterwards turning it over on the palm of the hand. The metacarpal bone of the thumb is also blown away; I may save the integument, even if the bony portion of the thumb must be sacrificed. The skin of the hand, and especially of the palmar surface, has a good deal of vitality, and by dissecting it off we may save some of it. The metacarpal bones of the middle, ring, and little finger retain their integrity. We may interfere with the palmar vessels, and in that case

there may be hemorrhage. An Esmarch's bandage is applied, the index finger is removed by severing its slight integumental attachment, and the thumb is removed at the carpo-metacarpal articulation. Now the vitality of the integument of the thumb may not be much interfered with. I shall endeavor, therefore, to preserve some of it. I have saved enough to close the gap between the palmar and dorsal flaps after cutting away the redundancy. Recollect that the radial artery is in close proximity and must be avoided. Now I must get rid of the pulplified tissue, which perhaps is best done with the scissors. The projection of the trapezium is also retrenched with the bone forceps. I can make a pretty fair approximation. The constricting band is now removed, the volar artery is tied, several other bleeding vessels are ligated, and the wound is washed with water. You see the skin which I dissected from the thumb comes in well here. I bring it over the external surface of the metacarpal bone of the middle finger. The accommodation of the flaps is assisted by a few snips, taking off the redundancies, and the approximation is made by means of fifteen silver wire sutures. You see we have restored it in pretty good shape. The dressing shall be lint and carbolized oil, and it is exceedingly probable that we shall have a fair amount of use in this maimed hand, which will at any rate be far better than any form of artificial hand.

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[There was considerable burrowing of pus in this case subsequently, and he was finally discharged to the out-patient department of the hospital with an ulcer still remaining at the point where there had been some sloughing of the cutaneous flaps.]

#### TRANSLATIONS.

**PATHOLOGICAL ANATOMY OF LEUCOCYTHÆMIA.**—Dr. A. Szastnoy, of St. Petersburg (Prof. Rudnew's *Journal for Normal and Pathological Anatomy and Clinical Medicine* (Russian), 1876, p. 261), has written a long and exhaustive paper on leucocythæmia. The conclusions he draws from the study of a series of cases, and from elaborate microscopical researches, are as follows:

1. Leucocythæmia is anatomically characterized by new formations of the type



of the lymphatic tissue, belonging, according to Virchow, to the lymphomæ.

2. The leukæmic lymphomæ, affecting primarily the lymphatic glands and the spleen (hyperplasia), do not limit themselves to these organs, but are capable of dissemination to surrounding structures, and even to distant metastasis.

3. The leukæmic lymphomæ of the lymphatic glands and the spleen do not differ anatomically from lymphomæ of the same organs, due to other pathological processes, and, in the absence of other lesions, are not important in the diagnosis of leucocythæmia.

4. By careful microscopic examination it can be seen that the leukæmic new formations, beyond doubt, do exist in the connective tissue of the organs involved, predominating along the course of the vessels filled with white corpuscles, and being characterized by very distinct and durable cellular elements, of round shape.

5. These exclusive peculiarities of the leukæmic lymphomæ, together with the constant feature of the small veins and capillaries being distended and filled with white blood-corpuscles, are entirely sufficient to diagnose leucocythæmia anatomically, and to distinguish them from tuberculosis, scrofulosis, etc.

6. The leukæmic new formations are usually secondary lesions affecting organs which were previously involved by some other pathological process.

7. The chronic interstitial and the parenchymatous inflammations usually observed in these lesions cannot be regarded as the cause, but as being due to the new formation.

8. The leukæmic lesions are produced chiefly by extravasations and proliferation of white blood-corpuscles. The new-formed lymph-cells coming in contact with, and infecting, as it were, the elements of the connective tissue, call forth an increase in size and number of the latter, and involve in this way also surrounding structures.

9. The lymphoid elements agglomerating around the vessels, between the connective-tissue fibres, by and by push asunder the latter as well as the parenchymatous elements of the organs involved, and produce atrophy and fatty degeneration of the cells concerned. Hence the destructive character of the leukæmic new formations.

10. The lesions of the bones in leucocythæmia are *not due to active hyperplasia of the bony marrow*, but exclusively to increased extravasation of white blood-corpuscles and their proliferation outside the vessels of the marrow.

H. F.

#### LOCAL TREATMENT OF THE VARIOUS FORMS OF SYPHILIS.—Sigmund (*Viertel-*

*jahrschrift f. Derm. u. Syph.*, 1877, p. 436; from *Wiener Med. Wochens.*) prefers water, alcohol, ether, collodium, and glycerin as excipients before the various ointments, the former being neater and cleaner, simpler, more easily prepared and kept, and more conveniently used. Chlorate of potassium and acetate of lead may be used with advantage in aqueous solution (1 : 30) as protectives in excoriations of the skin of uncertain character. Even in extensive injuries, when these are superficial, they act well by coagulating the secretion and thus preventing further infection. They do not irritate the wound or the neighboring healthy integument, and they cause no pain. The lead is to be used preferably in excoriated, moist papular infiltrations, mucous patches, etc., in order to prepare these for the later use of other local means. Alcoholic solution of corrosive chloride of mercury (1 : 400), when applied carefully, covers excoriated and eroded patches of skin with a thin adherent layer under which the formation of epithelium goes on rapidly. The application can easily be confined to the spot required, and its action may sometimes be hastened by quickly brushing the affected region with alcohol beforehand. Stronger solutions (2-10 : 400) are caustic, and are best made in collodium. Sulphate of copper solution (1 : 200-400) makes a good wash or injection for use between the prepuce and glans. Stronger solutions (1 : 50-100) used for 5 to 15 minutes are caustic, and concentrated solutions (1 : 3) are useful in deeply destructive processes in the soft parts: they give rise to a sharply-defined adherent crust, which comes away after some days, leaving a healthy sore. This salt may be employed to advantage in other forms (as ointment, crystal, powder, plaster) instead of nitrate of silver. The latter is particularly useful in lesions about the mouth. Empl. hydrarg. is a variously useful ointment, but is too stiff for ordinary use, and should be mixed with empl. saponis. From this mixture may be formed little plates, balls, rods, bougies, etc., at pleasure. Syphilitic infiltrations become

more rapidly absorbed under the local use of empl. hydrarg.

The preparations of iodine and bromine are particularly useful in diphtheritic exudations. Iodoform Sigmund thinks only occasionally useful, and not to be recommended, on account of its disagreeable and penetrating odor. Chloride of gold is quite inert.

Chloride of iron acts very much like sulphate of copper, only it is more penetrating and injures the whole skin. In indolent, easily-bleeding, gangrenous ulcers, complicated with scrofulosis or scorbutus, occasionally used according to Lister's method, chloride of iron acts surprisingly well.

Chloride of zinc acts very much like chloride of iron, but is not quite so satisfactory in the cases above mentioned. Chloride of zinc paste is not suitable for syphilitic patients. Phenyl, salicyl, and thymol are not worth much either as dressings or as caustics. They are useful, however, in diphtheritic and necrotic wounds, and also in abscesses of the lymphatic glands if these are complicated with diphtheritis and gangrene. They may be employed in watery solution 1:50 to 100 for cleansing or as paste. x.

RETROPHARYNGEAL ABSCESS IN YOUNG INFANTS (Justi: *Le Mouvement Méd.*, 1877, p. 572; from *Cbl. f. Chir.*).—It is known that primary idiopathic retropharyngeal abscesses, arising from the retropharyngeal glands and from the connective tissue surrounding them, are rare in infancy. Justi has observed only four cases in twelve years. Henoch observed only four cases in four thousand five hundred children under his care. Oppolzer mentions a number of cases in which asphyxia was due to abscesses opening spontaneously. M. Justi's four cases occurred in infants of six, seven, nine, and eleven months. In one instance tracheotomy became necessary; the child died during the operation. In the second case the parents refused to allow an operation, and the child died asphyxiated. In the two other cases the abscesses opened spontaneously, their contents escaping by the mouth. Scrofulous infants are particularly liable to retropharyngeal abscess.

With regard to symptoms: accumulation in the palatine cavity of glairy, frothy matters, reproduced in a little time after being removed, then swelling to a greater

or less extent of the sides of the neck, rapid respiration, and muffling or extinction of the voice, all point to this affection. The diagnosis may be completed by digital exploration of the back of the pharynx. In doubtful cases, exploratory puncture of the back of the pharynx is to be recommended. Should this exploration be neglected, and the case turn out really to be one of retropharyngeal abscess, death is almost inevitable. Justi gives notes of two cases which exhibit strikingly the difficulty of diagnosis, and the instant relief afforded by puncture. x.

GASTROTOMY.—At a recent meeting of the Académie de Médecine (*Le Mouvement Méd.*, 1877, No. 50) M. Cazin read a paper upon this subject, which terminated with the following conclusions. 1. Gastrotomy is applicable to cases of internal strangulation by bands or torsions, and in general when occurring suddenly, and in invagination. 2. It is not necessary to know the exact seat of the difficulty before operating. 3. Tardy operation diminishes the chances of success. 4. When the seat of occlusion is unknown, the incision should be in the median line, and sufficiently long; when known, the incision should be made over the seat of the occlusion, and should be relatively small. 5. In order to find the point of strangulation the operator should have in his mind all the possible causes of the difficulty, and should follow the method of Pansi, which simplifies the manœuvre considerably. 6. During the operation, extreme cleanliness, as in ovariectomy, should be observed, and Lister's method, at the same time antiseptic and antiphlogistic, should be employed. 7. Unless some particular indication arises, the patient should be left in perfect quiet, general and local; that is to say, the intestine should not be disturbed by enemata and purgatives. x.

CINCHONIDIA.—Dr. Hugh T. Nelson (*Virginia Medical Monthly*, December, 1877), after a large experience with cinchonidia as an antiperiodic, concludes that it is equal in efficiency to quinia in doses of the proportion of 1½ to 1 of the latter alkaloid.

THE death of M. Claude Bernard is announced by telegram. He was born July 12, 1813, at St.-Julien, Department of the Rhône, and was consequently in the sixty-fifth year of his age.

THE ordinary consumption of opium in this country is about three hundred thousand pounds per annum.

PHILADELPHIA  
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 16, 1878.

## EDITORIAL.

## THE PAYMENT OF MEDICAL EXPERTS.

THERE has been recently before the Indiana courts a case involving the right of medical experts to be paid for their opinions, and, consequently, of great general interest to the profession. Drs. Dill and Buchanan, of Fort Wayne, were called upon, in a trial for rape, to give an opinion upon a supposititious case, without prospect of compensation. They declined, and were sent to prison for contempt. Through counsel they then appealed to the supreme court of the State, asking for relief by habeas corpus proceedings. The chief argument of their counsel centred upon the proposition that their opinions concerning a supposititious case were their private property, acquired at a great expense of time, money, and labor, and consequently could not be taken from them for the public weal without compensation; also, that the rendering of such opinion was a particular service, and that the constitution of Indiana expressly provides "that no man's particular service shall be demanded without just compensation."

Whatever may be law, it seems to us common-sense justice and interpretation that giving a medical opinion is as much a particular service as the giving of a half-day's labor by a skilled mechanic, and that the State has as much right to take *vi et armis* the carpenter's means of livelihood—*i.e.*, his physical labor—as to take that of the physician,—*i.e.*, his mental labor. It was further clearly shown in the plea of the counsel for the doctors that a lawyer's opinion or service could not

legally be demanded by the court without pay.

In answer to the plea of the prisoners, Judge Lowry gave a very elaborate opinion, which may be found in full in the January number of the *Cincinnati Lancet and Observer*. As a result of this opinion, Drs. Dill and Buchanan were remanded to prison, and subsequently obtained their release by testifying as desired in the criminal court and thereby purging themselves of contempt.

It would be foolish for us to attempt a legal criticism of the opinion of Judge Lowry. We have no doubt that it is good law, for usually where a judicial decision is plainly unjust it is legally most excellent. A judge rarely has both bad law and bad justice simultaneously on his conscience. It would disturb his digestion as much as did Mark Twain's famous Yankee skipper that of the unfortunate cannibal who dined off of him and miserably perished through his toughness and oiliness.

It is, however, allowable for us to note several points in the judge's decision which to the untutored non-legal mind seem contradictory. The right of the attorney to compensation already spoken of is admitted. The cases seem to us parallel,—a use of intangible or not-materialistic skill involving no absolute loss except of time and labor by a professional man. But then there is the difference of the sympathy with a colleague and the jealousy of a rival profession, to say nothing of the antagonism of opinion which so often arises in the court-room between judge and doctor. The distinction is foreshadowed in our nursery rhyme. The old woman in her abbreviated skirts and unrecognized by her little dog was not to be put upon a footing with the same female in her glory of flowing robes.

More strangely, it is asserted by the judge that a physician ordered by the legal authorities to make a post-mortem examina-

tion has a right to demand compensation, but when called on for an opinion is debarred from asking more than at the rate of one dollar and a half a day. In either case there is an expenditure of time and exercise of skill acquired at cost; and why the difference? We are sure most doctors would rather make the post-mortem than dance attendance upon the court. Ah! but one is a particular service, and the other is not: so says the judge, and to his dictum we must humbly bow.

If the supreme court in full bench confirms, as no doubt it will, the decision of the individual judge, there are only two lines of defence left open to the profession of Indiana. Let the profession of the State collectively and earnestly carry the war into the Legislature, and the probability is that a proper law can be obtained. Otherwise, let general practitioners deny that they are experts, and thereby avoid all trouble. The truth is that most of the physicians who are called upon in courts are, in the high sense of the term, not experts, and much confusion and disgrace is caused by excellent and even learned practitioners, who have never studied or had experience in medical jurisprudence, assuming to decide delicate medico-legal questions. It would be a great gain if the putting aside of the vanity of individual doctors or the recognizance of principles by the courts would throw medical expert business into the hands of the comparatively few who really understand it.

ACCORDING to the recent report of President Eliot, the new régime at the Medical Department of Harvard has been, pecuniarily speaking, very successful,—the school having in three years accumulated a surplus fund of twenty-five thousand dollars after paying all expenses. From a scientific point of view the boldness and ability of the progenitors of the change have met with no less reward. The percentage of persons holding literary or scientific

degrees among the students of the medical school has risen to forty-four per cent.; seven years previously it was twenty-three per cent. Out of thirteen candidates examined for admission to the school who presented themselves in June, 1877, seven were admitted and six rejected; out of twenty-nine candidates in September, twenty were admitted without conditions, seven with conditions, and two were rejected.

THE merits of dialyzed iron as a chalybeate tonic become more and more apparent day by day. It is therefore of great importance that the manufacturers should keep up the standard of excellence; but as the price goes down and the demand increases there is a double temptation towards deterioration. We are therefore glad to see such papers as that of Mr. Henry Trimble in the last number of the *Journal of Pharmacy*, since fear of exposure is, after all, the greatest conservator of human morals. Mr. Trimble has analyzed samples made by six leading manufacturers of this city, and found that only one at all approximated the advertised strength,—namely, five per cent. of the oxychloride, —the scale ascending from 2.514 per cent. to 4.831. Most of the specimens contained a remarkably small amount of chlorine.

*The London Medical Examiner* of January 24 has a very appreciative notice of lectures by the notorious Mrs. Victoria C. Woodhull, who, it seems, is starring it in London. The theme appears to have been a congenial one with the orator, —namely, "Procreation." We trust she will meet with a measure of success which shall induce her long to tarry among our British cousins, who firmly believe "that she is sincere in all she says," and with whom "as an orator she ranks deservedly high."

THE world-famous electrician and manufacturer of electrical apparatus, Herr



Ruhmkorff, started at sixteen years of age as porter in the laboratory of Prof. Chevalier. He is said to have died poor, having spent his large earnings in scientific experiments.

THE Italian Government, having determined that a national Pharmacopœia is a necessity, has organized a commission for its preparation, and appointed Professor Cannizaro, of the University of Rome, its president.

RECENTLY a very damaging explosion occurred in a mixture ordered by a physician, of nitromuriatic acid and tincture of cardamom. Nitromuriatic acid should always be prescribed by itself.

## CORRESPONDENCE.

### LONDON LETTER.

THE most important subject of medicine at present here is that of the lectures of Dr. Burdon-Sanderson on the "Infective Processes of Disease." It is well known that Dr. Sanderson is a great authority on pathological processes, especially those connected with what are known as infective processes. He uses the word "infective" because "infectious" has acquired a secondary meaning which unfits it for his use. He holds that no contagious disease can arise *de novo* any more than an organism can originate *de novo*. About some infectious diseases we are practically certain that the true plant never comes up unless the seed has been sown, as, for example, syphilis, smallpox, or hydrophobia. About others we may allow ourselves more latitude, as about traumatic affections. It has long been familiar that an inflamed part is a focus from which irritating material is distributed to healthy parts by radiating lines of absorption; but it is only of late years that it has been distinctly seen and recognized clinically that every exudation-liquid of an inflamed part is more or less phlogogenic,—*i.e.*, carries with it more or less the properties of an inflammation-producing virus. Inflammations may be divided into two classes,—the infective and the non-infective. In the non-infective (normal) inflammations the pathological effects are coextensive with the injury, so that no tissue is destroyed except so much as has been spoilt by the noxa itself; in the infective the surrounding tissues are damaged, and, to a greater or less degree, destroyed, by the extension of the pathological process. When

no tissue is disintegrated beyond the limits of the injury, the reparative processes at once begin. Whenever the solution of continuity is surrounded by a zone of damaged tissue, then there is potentially an infective focus; and the question whether it will extend its influence beyond the limits of the part primarily affected depends on conditions which, however they may originate, have their seat of operation exclusively in the wound itself. He holds still that an essential condition of the development of infective action in a wound or an inflamed serous membrane is the presence in it of the organisms which he terms microgymes. In speaking of cholera, he thinks the question of germs or no germs should be eliminated from the inquiry. There are two factors, then, a local miasm and an epidemic influence. So important is the first that in India they say unhesitatingly the cause of cholera is local. In Europe cholera is an invader, passing over in storms. But the local factor is not without its influence; and some towns, like Birmingham, have always escaped, while Munich suffers severely in every cholera wave. Pursuing the infective process, he said that septic extracts were now filtered so as to get rid of any mechanical interference with the circulation. When injected into an animal first it shudders, then the muscular power is much lessened; at the same time the alimentary tract is affected. There is vomiting, with first feculent stools and then sanguinolent and mucous dejecta. If the amount of septic material administered be just below the lethal limit, violent gastro-enteric symptoms will pass away, and the animal will recover with great rapidity. The septic matter does not tend to multiply within the organism. When death occurs, it is due to heart-failure. After death it is found that blood is freely extravasated beneath the endocardium. The pleura and pericardium present points of ecchymosis. The spleen is enlarged and infiltrated with blood; while the mucous membranes of the stomach and intestine are intensely injected, the epithelium having been shed in life. The blood-corpuscles are affected, and the liquor sanguinis is itself of a red hue. Consequently, a large quantity of coloring-matter is lost by the blood-stained evacuations, or by the transformation of hæmoglobin into bilirubin. Accordingly, when animals recover from septicaemia, they are in the highest degree anæmic. Pyæmia is a malignant process which goes on and on to its fatal end; but in the case of septicaemia, inasmuch as the poison which produces it has no tendency to multiply in the organism, there is no reason why the morbid process should not come to an end of itself, unless either the original dose is fatal or a second infection takes place from the same or another source. His septic extract is prepared by boiling a putrid infusion of muscle in alcohol, then getting rid of the

alcohol, and then dissolving the alcoholic precipitate in water. It is toxic, and lethal in certain doses, like strychnia, or other poison.

It contains tyrosin, that is certain; and, probably, analogous bodies. It is perfectly transparent, but loses its virulent properties on being filtered through porous porcelain. Bacteria are not the agents in septic infection; but they are, nevertheless, the producers of the septic poison; just as the yeast-plant does not produce intemperance, but it produces that which does. Dr. Sanderson demonstrated the relations of the bacteria to the septic fluid by elaborate evidence. He then discussed the efficient cause of septicæmia, the septic poison, and the nature of the pathological process. Of the latter he said that it was characterized by (1) the loss of muscular strength, particularly of the heart and respiratory muscles; (2) by the marked tendency which exists to the development in certain viscera, but more especially in the lungs and in those which send their blood into the portal vein, of a congestion which has as its concomitant results capillary stasis and hemorrhage and diffused infiltration of the affected tissues; and (3), finally, by brain disorder and fever. He holds that the pernicious influence is first exercised on the blood-corpuscles. In forming this opinion, he is influenced by the fact that if two ounces of blood be taken from a dog, and allowed to coagulate, and then the clot be broken up and kneaded by the fingers, and the strained blood be re-injected into the animal, the gravest consequences follow. In a few minutes the animal is collapsed as if poisoned, the heart beats irregularly, and the respiration is difficult. Soon, alvine discharges appear, to be followed shortly by mucous and sanguinolent evacuations, and the animal dies in a state of great prostration: the post-mortem appearances are identical with those of septicæmia. The blood is fluid, and contains abundant masses of bacteria. There is this difference, however: the liquor sanguinis is not ruby-colored, as in septicæmia. In the coagulation of the blood a large number of colorless corpuscles are broken up into granular matter, and from this granular debris the filaments of fibrin are seen to be originated. Besides the fibrin factors there is in the blood a ferment which excites the molecular changes which result in coagulation. It is in the leucocytes that this ferment is produced. When the blood is returned to the body, intravascular coagulation is induced. This is very marked in terminal vessels like those of an intestinal villus, and, consequently, the alimentary tract is profoundly affected. As to the pyrexia, he says, "I think it very unlikely that it is produced by the disintegration of the leucocytes. It seems to me much more probable that the damage done by the septic poison has a wider range, and affects all the more unstable forms of proto-

plasm, that is, all the more active structures of the body; and that, in accordance with the view of fever which I submitted to you in my lectures here four years ago, the pyrexia which it produces is the expression of that general damage." Dr. Sanderson's lectures are not concluded yet, and will be referred to in my next letter. They are most important contributions to our knowledge, and have a high practical value.

The whole of our pathological knowledge will be brought to bear in time upon practical medicine; and though such bearing is not always readily and at first sight apparent, still it is found sooner or later to be operative. This study of the infective process already promises to branch out in several important directions and to bear practical fruit. We see that a certain dose of septic poison can be survived, while a larger dose is certainly lethal; just as we see in the case in poisoning with other toxic agents. Consequently in septicæmia a certain dose of the poison may be survived, because it is not reproduced in the system. On the other hand, the hopelessness of pyæmia lies in the fact that continuous poisoning goes on from one or more infective foci, and consequently all the efforts of the system to rid itself of the poison are neutralized and rendered inoperative by this new poisoning constantly going on within the organism. The study of the active agents in the infective process will indicate in time a valid line of treatment.

During the recent festive season there has been a large consumption of natural waters as well as of other good things of life. Indeed, too much of the other good things leads to the necessity for such waters, whether as beverages to satisfy thirst and in doing so to wash the tissues, or as active cathartic agents. The use of such waters is now very extensive, and there are many applicants of each order for public favor. Some of these are largely recommended by leading members of the profession, a fact which seems very objectionable to the *New York Medical Record*. In the same number which announces its enlargement, it takes umbrage at the fact that the European practice of advertising the medical recommendation of certain waters has extended across the Atlantic and spread into the United States of America. It forebodes the most disastrous consequences therefrom, and looks upon the thing as a moral cholera; the disintegration of all medical ethics has been initiated thereby, and the profession in America is apparently doomed to a swiftly-coming decay, as the consequence of such acts as the testifying to the qualities of waters by leading members of the profession. It might have struck the writer, first, that such members of the profession are least in need of any notoriety such advertising may give them; and second, that having already acquired reputations they have something to lose which they are not likely to

throw away recklessly. It is not likely, on the face of the thing, that men of professional status and eminence are going to imperil their reputations by certifying to a water that is not what they state it to be, unless American shrewdness is wearing out amidst their medical men. On the other hand, what is not only done by many eminent men in Great Britain, but also by such Germans as Virchow, Bamberger, and Scanzoni, can surely not be so very demoralizing, and there can be nothing very lowering to such well-known men as Fordyce Barker, Lewis Sayre, Flint, and Hammond, in their following the example set them. That the dignity of a time-honored profession is imperilled by such testimony may be clear to the writer of the article, but it certainly is not very apparent to us on this side of the water. Certain it is that a reckless resort to medical testimony, and the abuse of it, would be unfortunate in every way; but that is not yet the case. Perhaps the *New York Medical Record* has got a prophetic eye, and is peering into the distant future and seeing what is not yet apparent to the ordinary vision. The whole question of putting forward medical recommendations and testimonies shows, in a very unmistakable manner, the importance which the public attaches to the opinion of the profession. There is no doubt about the fact that the confidence of the public in the medical profession is on the increase, and deservedly so. The profession is making the most strenuous efforts to render itself worthy of public confidence, and it is feeling that its well-earned position is being more and more recognized and its claims to be heard admitted. At this time, anything which could tend, however remotely, to shake this position and to lessen the confidence reposed by the public in medical men would be very unfortunate. It is quite proper that medical journals should exercise the keenest supervision over the profession collectively and individually; they must indeed constitute themselves the wardens and custodians of the morals of the profession. But, such being the case, it makes it all the more necessary that charges brought against the profession or members of it should be founded on strictly public grounds, and not have about them a flavor of personal feeling.

Such guardianship of the profession is fast being demonstrated by a controversy started in the *British Medical Journal*. It commenced by a letter headed, "A Lost Medical School," and pointed out the present position of medicine at the old and famous University of Oxford. According to the late Henry Thomas Buckle, Oxford has always been ultra-conservative and obstructive. Medicine has never flourished very genially there; the soil there is apparently not very well adapted for the growth of a study which is essentially liberal in every way. Some time ago great

things were expected, but now the medical teaching is falling into abeyance. It appears that in the *University Gazette*, at a recent date, stood "Medical Faculty: Regius Professor, H. W. Acland (no lectures); Clinical Professor, H. W. Acland (no lectures)." Now even this semblance of an existence has passed away, and the faculty has been removed from nominal being. It is further stated that "the chair of physiology, founded by the late Commissioner of 1854, has been equally diverted from the service of medical science and of physiology proper. Founded on the remains of the old chair of human anatomy, the present holder, Professor Rolleston, occupies himself and his pupils with any variety of collateral subject, provided that it has no relation to human anatomy and physiology and cannot possibly be pressed into the service of medicine. Saxon interments, early ceramic ware, and pre-historic pigs monopolize the attention of the successor of Willis." This is certainly severe upon the distinguished author of "The Forms of Animal Life." It appears, too, that the famous Radcliffe Infirmary, with its two hundred beds, is unused for medical instruction. This charge is brought forward by a person evidently well acquainted with the facts, and certainly not afraid of speaking out. It seems lamentable that something more cannot be done to keep medicine alive at Oxford. It seems to be flourishing, for the present at least, at the rival University of Cambridge; but whether this is just a transient gleam, soon to die out, as the Oxford flash has, or something of a permanent nature, remains to be seen. At Oxford, medicine is being utterly neglected; even the Radcliffe Library has been removed from its home in the well-known dome, and the Radcliffe funds are made to supplement the Bodleian Library. The two libraries are now mixed up to a large extent, and it appears that the Bodleian librarian refuses to buy works on physical science. "It appears the clergy have proved themselves the deadly enemies of the medical faculty at Oxford, and Dr. Lee's Readership in Anatomy (worth £300 a year) is now misapplied in paying a gentleman to coach the undergraduates of Christ Church in zoology for their B.A. degree." These statements almost suggest the idea of the deliberate betrayal of the medical interests by the two professors mentioned, if the high character of each of them did not preclude it. It is evident that there exists in Oxford some body which is hostile to medicine and strong enough to stifle it. The well-known hostility of the clergy to medical men for their support of evolution has been demonstrated by their activity in the anti-vivisection agitation; while at Oxford, where they are supreme, they are practically abolishing medical study at the University. Of course the utter puerility of such tactics to stop the growth of modern thought is obvious enough.

But these people may succeed by their manœuvres in attracting such a share of public attention as shall cause an entire reform at Oxford. They possess, if they were only rightly used, the funds to endow such a medical school as exists not elsewhere in her Majesty's dominions; and if the present exposure should lead to such results, one can only feel that any pain or suffering caused to the two present professors by this ventilation of the subject must be endured by them with such stoicism as they may possess; and they can certainly console themselves with the thought that it is a species of martyrdom they are enduring. At present, the men who desire to take a medical degree at Oxford mostly gather to St. Bartholomew's Hospital for their medical work. They, of course, are anxious to defend their old friends and teachers; but, if the facts are as they are stated, they will find defence difficult.

### PROCEEDINGS OF SOCIETIES.

#### **PATHOLOGICAL SOCIETY OF PHILADELPHIA.**

THURSDAY EVENING, NOVEMBER 22, 1877.

The PRESIDENT, DR. H. LENOX HODGE, in the chair.

*Perforating typhoid ulcer of ileum.* Presented by Dr. F. P. HENRY. Clinical history by Dr. LOUIS STARR.

C. G., æt. 31, an Alsatian, a cabinet-maker by trade, was admitted to the male medical ward of the Episcopal Hospital on November 2, 1877. His health had been good until two weeks before admission, when he began to suffer from headache and general malaise; there was also a tendency to diarrhoea, and upon several occasions he had slight hemorrhages from the nose. On October 31 he became too sick to work, and upon coming to the hospital, two days later, he presented the ordinary features of a case of typhoid fever of moderate severity. During the first five days of treatment, complaints were made of abdominal pain, and the diarrhoea was more than usually profuse; at the end of this time, however, both symptoms abated, the stools being reduced to one or two in twenty-four hours, and the disease appeared to be progressing very favorably.

At noon on November 11, the tenth day of treatment and the twelfth day of the attack, the patient was suddenly seized with severe pain in the right iliac region; one hour later, he had a severe chill, accompanied by the discharge of about half a pint of dark, partially clotted blood from the bowel. Throughout the succeeding twenty-four hours there were eight hemorrhages from the bowel, the quantity of blood lost being estimated at nearly six pints. There was *slight* distributed tenderness of the abdomen, the respiration

was chiefly thoracic, and deep inspiration caused pain at the epigastrium, but there was little or no abdominal distention. The general symptoms were those of collapse. The intellect remained clear almost up to the moment of death, which occurred at 2.30 P.M. on November 12.

I am indebted to Dr. Starr for the preceding clinical history, and for the opportunity of presenting this specimen.

I have already read two papers before this Society on the intestinal lesions of typhoid fever, with special reference to the occurrence of perforation, in which I maintained that peristalsis is abnormally excited in typhoid fever, and that this abnormal peristalsis occurring at a critical period of the disease, viz., when the patches are at their acme of medullary infiltration, might convert what would otherwise be a gradual molecular ulceration, into a sloughing *en masse*, and thus favor perforation. I also maintained, and do still, that peristalsis favors perforation not only in the manner just described, but also in all three of the modes in which, according to Murchison, this accident occurs,—viz., "1, by rupture of the attenuated coats; 2, by a continuance of the ulcerative action leading to a pin-hole perforation; 3, by sloughing of the entire thickness of the bowel, and the dropping out of the sloughs." The gradation of the lesions I explained by the distribution of the superior mesenteric vein. It was argued, in opposition, that a perforation frequently occurs high up, and in states of constipation; but for fuller details I refer to the last volume of our Transactions.

Since my last paper I have analyzed twenty cases of perforation with reference to its association with diarrhoea, its situation, date of its occurrence, and the time elapsing between the first symptoms of the accident and the time of death. The cases are not numerous, but are interesting, because they are, I believe, the only ones that have been analyzed from these points of view, and because they afford a very decided confirmation of what I advanced on more strictly theoretical grounds.

Sixteen of the cases are reported in the first twenty-seven volumes of the Transactions of the Pathological Society of London, and three in the Transactions of the Pathological Society of Philadelphia. The case just reported makes the twentieth. In five of the cases there is no statement with reference to the condition of the bowels; in one the bowels were "regular;" in thirteen there was, either throughout or at some period of the disease, diarrhoea of all grades of intensity, from "profuse" and "urgent" to "slight."

In one of these cases perforation occurred during a relapse; in the primary attack there was diarrhoea, none during the relapse. In another there was at first constipation, for which compound jalap powder and castor-oil were given! It is scarcely necessary to add that



diarrhoea set in, nor is it at all to be wondered at that perforation occurred. In one case only was there a generally constipated state of the bowels. This is one of Dr. Murchison's cases, and is to be found in vol. xvii. Trans. Path. Soc. Lond. This, therefore, is the only case I have yet encountered that seems to militate against the peristaltic theory; and even it can be fully explained. The patient was a male, æt. 14, and death occurred "on the forty-second day, after apparent convalescence." He was gaining strength when, on the thirty-ninth day, he "had pain in the stomach relieved by pressure." . . . "It is worthy of note that the bowels had been constipated for several days." The author evidently considers the thirty-ninth day as the date of perforation, when the patient "had pain in the stomach relieved by pressure." Probably the pain was of a colicky nature, due to peristaltic efforts to impel the solid faeces along the intestine, and this *peristalsis* led to perforation. After perforation the pain is not "relieved by pressure;" and it is worthy of especial note that "on the following day the pulse rose to 124, the belly became very distended and tender," etc.

In the twenty cases there are twenty-seven perforations. In the present case, it will be noticed, there are three, very near together. In five cases the perforation was situated in the large intestine, as follows: in one case the vermiform appendix was perforated; in a second there was one perforation in the colon three and a half inches below the valve, and two in the sigmoid flexure; in two other cases there were single perforations of the sigmoid flexure; and in the fifth there was a perforation of the cæcum, communicating through an abscess with one in the ileum. As regards the seat of perforation in the ileum, in one case this is not stated; in another it is vaguely described as being in the "lower part" of the ileum. In the cases in which it is accurately given it varied between four feet above the valve and two inches above it, as in the present case. Eight times it occurred at twelve inches from the valve, or within that distance. In the perforation four feet above the valve the accident occurred in a relapse, and on the fortieth day from the beginning of the first attack. The perforation, although absolutely high up, was not so relatively, for it occurred within a foot of the primary cicatrized ulcers.

The insidious manner in which perforation often occurs is shown by the fact that in five of the twenty cases the date of the accident was not determined, owing to the absence of explosive symptoms. In the remaining fifteen cases it occurred at different periods, —the earliest being on the seventh day, the latest in the seventh week,—and this irregularity affords a strong proof that some extraneous circumstance, something not essential to the disease, is the cause of this accident.

This something I believe to be peristalsis, principally.

The frequency of hemorrhage in cases of perforation is very striking, this hemorrhage occurring before, at the time of, or after the accident. I cannot give the exact ratio of cases of perforation in which hemorrhage occurs, as I have not tabulated it, but it is large. Taken in connection with the cases in which hemorrhage occurs without perforation, this complication is to be regarded as a premonitory symptom of that accident, and prophylactic treatment accordingly instituted.

The hemorrhages occurring in connection with perforation are generally profuse, as no large arterial twig is eroded until the ulcer has nearly perforated. In speaking of hæmatemesis as a symptom of gastric ulcer,—and the statement is here almost equally applicable,—Leube says, "The most copious hemorrhages naturally occur from erosion of a large vessel, a symptom which can occur only when the ulcer, not necessarily a large one, has perforated all the tissues of the stomach." I would amend this statement by the addition of the word "almost," so that it would read, "when the ulcer has perforated almost all the tissues," for copious hemorrhage from the bowel in typhoid fever is frequently recovered from, and perforation almost never.

The time elapsing between the first symptoms of perforation and death could be determined in fourteen cases, and varied between a few hours and fifteen days, as follows: in four cases, within twenty-four hours; in five, within forty-eight hours; and in the remainder, three, four, five, seven, and fifteen days after.

Dr. ROBERTS said there had been no reference to perforation of the intestines occurring in walking cases of typhoid fever. He was able to recall the case of a man who presented himself at the Pennsylvania Hospital complaining of abdominal pain; he had been sick about twelve days, and, having no passage from the bowels for about a week, had the night previous to coming in the hospital taken a purgative. After being admitted into the hospital, more marked symptoms of peritonitis set in. Dr. Meigs, who was on duty at the time, thought the case would prove to be one of walking typhoid fever. The patient died in six days, and the autopsy showed perforation of the intestines, about six inches above the ileo-cæcal valve, with general peritonitis, which was thought at the time to be due to the purgative.

Dr. HENRY replied that he had, two or three years previously, reported a case of walking typhoid fever, which would be found in the Transactions. The man, a patient in the Episcopal Hospital, during his illness continued daily to walk about the wards. His only complaint was of vertigo. Typhoid fever was suspected, and he was kept on liquid diet. Death occurred from perforation of the ileum.

*Cirrhosis of the liver.* Presented by Dr.  
F. H. GROSS.

On the 22d of last month (October) I was requested by a medical friend to see a patient, with the object of performing the operation of paracentesis abdominis; but, as the gentleman alluded to was himself ill, I did not have the opportunity of meeting him at the bedside of the patient. The latter I found to be a German, aged 42 years, and by occupation a dealer in shoe-findings. He was greatly swollen from effusion into the peritoneal cavity, and from anasarca of the lower limbs and scrotum. There existed also a reducible umbilical hernia of the size of a large fist. The urine was high-colored, not scanty, but deposited a copious sediment of lithates. He had felt ill at irregular periods for a year or so, and during that time occasionally consulted a physician, but was not confined to his room and bed until about five weeks prior to my first visit. During the earlier stages of his disease he is said sometimes to have had an icteroid appearance, and about a month before my seeing him a marked attack of jaundice, but this had entirely disappeared. So far as I could learn, the real nature and seat of the disease had not as yet been made out. The gentleman at whose request I saw the patient, and who, on account of his own temporary illness, felt induced to relinquish the case, had been in attendance only a short time.

In regard to the patient's habits I learned that he drank beer regularly, and occasionally light wines, and at times, when suffering from depression of spirits, which is said not to have been very frequently, he would indulge more freely in beer, but was never addicted to the use of the stronger alcoholic liquors. Though not markedly emaciated, he was now very weak, mentally as well as physically. His memory being unreliable, he was able to give only a vague account of the progress of the disease, or of the train of symptoms that had manifested themselves. I regret, therefore, that the history of the case is necessarily incomplete. We may assume, however, that it did not differ materially from the generality of cases of cirrhosis of the liver uncomplicated with organic disease of other vital organs. He had often complained of a general sense of discomfort and of dull pains in various parts of his abdomen, and during the past summer felt that this part of his body was enlarging. At that time there was already some dyspnoea, especially on making any bodily exertion. He was then told that he had the asthma, and later on that he was getting the dropsy. Whatever doubt there may have been concerning the former, the latter was certainly true, as I drew off at my first visit, by the operation of tapping, nine quarts of pale-yellow and slightly turbid serum.

In regard to the diagnosis, I have to say

that at my first examination of the patient, and more especially after the drawing off of the peritoneal effusion, when a more satisfactory physical exploration of the abdominal as well as the thoracic viscera could be made, and from the hardened feel of the liver below the edge of the ribs, I suspected no other disease than cirrhosis of that organ. And when some days later an examination of the urine showed no trace of albumen, and a renewed exploration of the organs of the chest revealed no organic disease there, I felt strengthened, by a process of exclusion, as it were, in my original inference, and the existence of cirrhosis of the liver was as clearly established as could be without positive demonstration.

The prognosis, as a matter of course, was unfavorable, and the treatment only palliative. Upon the administration of diuretics and benzoic acid with borax, the secretion of urine became more copious, of lighter color, and ceased on cooling to show any sedimentary deposits. Such tonics, and also as generous a diet as the stomach would tolerate, were allowed. From the opening made by the trocar, fluid continued to ooze for about eight days, which was absorbed by the application of sponges and cloths. The swelling of the abdomen was, therefore, kept down, and the anasarca of the lower extremities and scrotum disappeared. The debility of the patient was, however, steadily progressive, and he finally died of exhaustion on the 8th of November.

*Autopsy*, about thirty-six hours after death. —On opening the abdominal cavity the liver was noticed at once to be the seat of disease. It was hardened, and had a firmer feel than in the normal state. Its color was of various tints of yellow, and it presented upon the greater part of its surface numerous rounded elevations of different sizes, giving the so-called hob-nail appearance. The corresponding depressions indicated the existence of fibrous tissue, compressing the lobular structure. Its weight was four and a quarter pounds. The gall-bladder contained a quantity of dark bile of a thick consistence, which imparted a sandy feel between the thumb and fingers. The kidneys were of normal size, and appeared to be entirely healthy in their structure, as did the other organs of this cavity. The thoracic organs were healthy. To Dr. J. Collins, who assisted at the *post-mortem* examination, I predicted the finding of a cirrhotic liver.

The following is a note from Dr. Seiler of the microscopic examination:

"A section of the liver made with a Valentin knife, and stained with carmine, shows large bands of connective tissue surrounding the lobules, while the liver-cells were mostly in a state of advanced fatty degeneration, many of them having been supplanted by fat-globules."

Dr. SEILER said he wished to show, in con-

nection with cirrhosis of the liver, a microscopic section made from the liver of a cat, in which could be seen the physiological changes occurring in this disease. There is a very decided increase of the connective tissue, forming wide bands between the lobules of the organ; the liver-cells, however, are found to be perfectly healthy; there is not any fatty degeneration observable. Dr. S. thought this was a demonstration of an inflammatory condition of the liver causing cirrhosis, without any fatty degeneration; also that we may have this pathological change in the organ without intemperance or syphilis being the exciting cause.

*Tumor removed from the parotid region.* Presented by Dr. JOHN H. PACKARD. Notes by Dr. ROBERT M. SMITH.

Robert J. Ray, æt. 58; Irish; by occupation a ship-carpenter, was admitted to the male surgical ward of the Episcopal Hospital, October 26, 1877. Stated that nearly thirteen years ago he noticed a small, firm, painless nodule forming in his left cheek, just above the angle of the jaw. It was freely movable, and gradually increased in size, until it became as large as a hen's egg, but never interfered at all with the motions of his jaws, or gave him any pain, until about two weeks ago, when he suffered from a severe shooting pain in the tumor and left side of his face. He then noticed that his face was drawn to the right side, and, as he says, was without sensation; the left eye also, at this time, "became crooked."

When admitted to the hospital, there was a firm tumor, slightly but distinctly movable, occupying the whole of the left parotid region, and extending under the ramus of the jaws, not sensitive to pressure. Paralysis of the muscles of expression of left side, visible even when the face is at rest; no loss of sensation detected; paralysis of the superior oblique muscle of left eye; tongue protruded straight; no interference with movements of jaws.

Tumor removed October 29, 1877. It was found to lie directly upon the sheath of the carotid artery, implicating, to some extent, the parotid gland, the duct of which had to be divided. No hemorrhage occurred during the course of the operation. Wound closed, and dressed with lint soaked in laudanum; morph. sulph. gr.  $\frac{1}{2}$ , hypodermically. Liquid diet.

November 3.—Wound looks remarkably well; no pain; ligature came away; stitches removed; placed on soft diet. Says he feels very well, and wants to go home.

November 4.—Had a slight chill. Quinia, gr. vi.

November 6.—Cough; pain in the chest; physical examination revealed pneumonic consolidation of anterior portion of lower lobe of right lung. Ordered morphia cough mixture, p. r. n.; jacket poultice; quin. gr. iij, t. i. d. Sputa tinged with blood, and very tenacious.

November 7.—Tr. digitalis, gtt. xv, four times daily; very little febrile reaction; no extension of pneumonia.

November 22.—Wound of operation almost wholly healed. The pneumonic symptoms nearly gone.

*Report of the Committee on Morbid Growths.*

—"The tumor removed from the parotid region presented by Dr. Packard, and referred for examination to the Committee on Morbid Growths, is found to be composed of different histological elements, constituting several varieties of new formations. In circumscribed localities are seen epithelial cells, grouped together irregularly within alveoli, formed of fibrillar connective tissue, constituting carcinoma,—variety scirrhus. In other parts of the growth are seen large round cells, which contain a large granular eccentric nucleus. The cells appear to be imbedded in a hyaline matrix, through which run a few isolated fibres of fibrillar connective tissue, characteristic of cartilaginous tissue. The remaining and greater bulk of the tumor is seen to consist of spindle, stellate, and oval cells, with a fibrillar connective-tissue intercellular substance. Here and there the cells form a reticulated tissue, in the meshes of which is seen a structureless substance, made granular by the employment of the reagents used in preparing the section; a myxomatous tissue. The blood-vessels throughout the growth are very distinct, and have their walls somewhat increased in size by concentric layers of fibrous tissue. The new formation may be considered a carcinoma myxomatodes, containing cartilaginous tissue.

"December 13, 1877."

*Pneumonia of the apex, with unusual physical signs.* By Dr. JOHN GUITÉRAS.

A. W., æt. 60; tailor; German; admitted to the Philadelphia Hospital on the evening of the 15th of November, 1877. Night nurse did not think he was very sick. In the morning he was found at the window trying to get some air. When my resident, Dr. Musser, saw him, he was sitting by his table, leaning his head on it, and suffering with much dyspnoea. He was ordered to bed. He had fever, cough, no appetite, and the bowels were constipated. He had been sick about ten days, though at no time in bed. Has always been a very healthy man.

Inspection showed a marked prominence of the front of the right chest, especially towards the apex; *pulspation*, a complete absence of vocal fremitus. At the level of the folds of the axilla the right chest measured two inches more than the left. Flatness upon *percussion* extended from the apex to the lower margin of the middle lobe of the lung in front, and was readily traced backwards and upwards along the side of the thorax in the direction of the line of separation from the lower lobe. On *auscultation*, the râles of œdema were found to be very abundant over the left lung and in-

ferior lobe of the right. Over the area of dullness the same râles were heard, but appeared distant; the lung itself gave no sound; there was no bronchial breathing, no vocal resonance. A forced whispered expiration gave rise to a feeble and distant blowing sound, hidden somewhat by the tracheal gurgling, yet harsh and characteristic of consolidation. He died the next night.

*Autopsy.*—No emaciation or discoloration of the skin. The enlargement of the right upper segment of thorax is apparent to the eye. On removing the sternum the upper and middle lobes are found consolidated, and bulging out and towards the left about one inch beyond the median line. No adhesions of the left pleura. Recent adhesions of the right, and an effusion of about four ounces of serum, with shreds of lymph floating in it.

On removing the lungs, the two affected lobes were found to present the same volume as the left lung and the lower lobe of the right; these latter portions were cedematous. The upper lobes presented the grayish marbled appearance of gray hepatization, exuding the characteristic reddish, purulent fluid. The tissue breaks down readily on pressure. In the middle lobe there are some spots of red hepatization. Except in the very root of the lung, the bronchial tubes are collapsed or filled with pus. Healthy portions of lungs weighed two pounds; the diseased, four and a half pounds. There was an ante-mortem clot in the right heart.

The other organs were healthy.

*Remarks.*—The lack of treatment, the age of the patient, the localization of the pneumonia, contributed to the fatal termination. Though pneumonia of the base is so much more frequent than pneumonia of the apex, yet I believe I have seen as many post-mortem specimens of the one as of the other.

The interest of the case is found in the physical signs. These clearly pointed to a circumscribed pleuritic effusion. I diagnosed pneumonia from the direction of the line of dullness alone. Sufficient attention is not paid to this very important element of diagnosis,—viz., the position of the inter-lobar lines. We all know how frequently they are boundary-lines for pathological processes.

The physical signs here were due to the absolute absence of air from the affected lung. The bronchial tubes were not patulous; even the larger ones were filled with thick inflammatory débris, thus interfering with the production of blowing breathing, increased vocal resonance and fremitus. The same factor entered with the pressure of the swollen lung against the chest-walls, in the production of absolute flatness.

**DEODORIZED IODOFORM.**—Dissolve in ether and apply to the diseased parts. On evaporation an odorless coating of iodoform is left.—*L'Union Médicale.*

## REVIEWS AND BOOK NOTICES.

**THE ELEMENTS OF THERAPEUTICS. A CLINICAL GUIDE TO THE ACTION OF MEDICINES.** By Dr. C. BINZ, Professor of Pharmacology in the University of Bonn. Translated and edited by Edward I. Sparks, M.A., M.D. Oxon. New York, Wm. Wood & Co., 1878.

This is a large duodecimo of three hundred and fifty pages, the joint fruit of the labor of its German author and its English editor. The reputation which Prof. Binz has made by his researches upon quinia and other drugs had prepared us warmly to receive this his latest intellectual offspring. A close examination has, however, yielded very unsatisfactory results and much disappointment. A very large portion of the space is occupied with useless or comparatively useless details concerning the "preparations," whilst the bare physiological outlines are frequently more dogmatic or confusing than correct. Thus, in the article upon cantharides, less than a page is occupied with a discussion of the *materia medica*, physiological action, and therapeutic uses of the drug, more than a page with the details of the preparations. This is, however, of small moment compared with the gross errors which so abound in the sections on physiological action. This branch of pharmacology is of course only in its early stages, but there are already many settled points, and the teacher who, through indolence, carelessness, or natural perversity, fails to recognize, or distorts and misplaces, these landmarks, is most culpable, as bringing "physiological therapeutics into disgrace" by abetting the idea that it is all a "shaking bog" of doubt and guesses. We have not space to point out even a large proportion of the errors, but must be content with a few examples. On page 178 is the extraordinary statement that the antiphlogistic effect of calomel "is most probably chiefly referable to a reduction of abnormal temperature by the calomel." On page 210, speaking of the physiological action of quinia, he says, "The action of quinia is not a specific one in the ordinary sense; for other bodies, like alcohol, the acids, the ethereal oils, and most of the officinal vegetable bases, agree with it in their essential properties," etc. On page 229 we are told that vegetable acids render the urine alkaline! on page 193, that chlorate of potassium is a powerful oxidizing agent, acts as such, and that large doses "often seem to cut short diphtheria;" on page 54, that the action of ergot upon the vessels is independent of the vaso-motor centres. We read, also, that digitalis arrests the heart in diastole; that the action of ether differs very slightly from that of chloroform; that "no one has as yet clearly proved that counter-irritation is of real use in diseased conditions," etc.

Not long since, at the University some



papers flying about the grounds attracted our attention, and on examining them we found that they were sentences from the latest magazine article of a noted Philadelphian, which had been used as exercise papers by the students of rhetoric to "point out the errors of composition in." We would commend the work before us as affording abundant opportunity for student-drilling to the professor of the art of book-making.

Different subject-matters are interjected into one another like cannon-balls into heaps of ruin. An example, p. 178, is an italic heading "Uses," followed by paragraph No. 1, then another heading "Preparation," with one paragraph, then paragraph No. 2 a direct continuation of subject-matter of No. 1, then a series of paragraphs on "Uses," and finally "Preparation" again.

An error, most confusing for the student, which we trust young book-makers will sedulously avoid, is incorrectness in official names, a very large proportion of the American official names being incorrectly given; also the strength of the American preparations is very frequently, if not very generally, incorrect.

Finally, the therapeutics of the work do not always agree with the prejudices of this locality,—as when we are told that (p. 178) one of the uses of calomel in a single large dose is to cut short typhoid fever; also, as when the antiperiodic action of quinia is either unknown, disbelieved, or ignored, not a word being said about the use of the drug in malarial diseases!

The name of Prof. Binz may carry his work to a successful market, but certainly his reputation in America will not be advanced thereby.

ON THE USES OF WINES IN HEALTH AND DISEASE. By FRANCIS E. ANSTIE, M.D. Macmillan & Co., London, 1878.

This is a reprint of the well-known and very valuable papers upon the subject published in *The Practitioner* by the late Dr. Anstie. It should be closely read by every practitioner of medicine who has not already performed this pleasing duty. The information in it is both novel and satisfactory, and is also of the most practical character.

## GLEANINGS FROM EXCHANGES.

INCUBATION OF HYDROPHOBIA (*The Medical Press and Circular*, December 26, 1877).—In the special reports now being published on the nature of rabies, after considering the existing evidence in regard to the incubative period, the following conclusions are arrived at:

1. The duration of the latent stage has an indefinite, though to a certain extent a regular, course, for the majority of cases collected, not

only by English but also by foreign observers, prove that the interval has generally been from one to three months.

2. That age influences the incubatory period, it being shorter in young than in old people. Fleming tells us that from an estimate of ages, from three to twenty, and from twenty to seventy-two, it has been found that for the first group there was a mean period of forty-four days, and for the second of seventy-five days.

3. Having such an almost accurate idea of the average period of incubation, the physician, whilst not neglecting all reasonable precautions, can hold out reasonable hopes to his patient of an almost perfect immunity after three months, and an increasing hope with every month that passes, so that, after a year, he may afford a scientific certainty of the patient's safety. In other words, all reputed cases of rabies occurring after a year must be looked upon with suspicion, and should the symptoms be simulative, other causes must be assigned, as re-inoculation, etc.

THE TREATMENT OF DIPHTHERIA (*The Medical Record*, January 12, 1878).—Dr. C. E. Billington, visiting physician to Demilt Dispensary, records the methods and results of his treatment of diphtheria during the last three years. They are briefly as follows. He employs three formulæ, which he alludes to as Nos. 1, 2, and 3.

No. 1.—*Iron and Glycerin Mixture.*

R Tinct. ferri chloridi, f3i-f3iiss;  
Glycerinæ,  
Aquæ, aa f3i.

No. 2.—*Chlorate of Potash Mixture.*

R Potass. chlorat., 3ss-3i;  
Glycerinæ, f3ss;  
Liquor. calcis, f3iiss.

No. 3.—*Spray Mixture.*

R Acidi carbolici, ℥xv;  
Liq. calcis, f3vj.

(To be used with a small hand-atomizer.)

He then gives the following rules for treatment:

I.—Give a teaspoonful of No. 1 and of No. 2 alternately, every half-hour, except at night, when the patient may be allowed to sleep for an hour or two at a time.

II.—Spray the throat with No. 3 for several minutes at a time whenever the above mixtures are given,—that is, every half-hour. It is essential that the nurse be carefully instructed in the proper method of doing this. The mouth must be opened widely. When the child is too young to do this, the spraying must be omitted.

III.—When there is nasal implication, the nose should be thoroughly syringed out with warm or tepid salt water, once, twice, or three times a day. I have lately employed no other agent. It should be done with the patient's head inclined forward, after the method which is described in my above-mentioned paper. It is very important that the physician know how to do this well, and, generally, *do it himself.*

I have always used a two-ounce hard-rubber ear-syringe. It is absolutely essential that this have a suitable nozzle, which is not always the case.

IV.—Do not (as a rule) apply any brush or swab to the throat. I sometimes throw a drachm of No. 1, with a syringe, directly against the affected surface in the throat.

V.—Do not (as a rule) give any quinine or other unpleasant medicine to children. This rule is of great practical importance.

VI.—Do not (as a rule) give alcoholic stimulants. Call this rank heresy as the majority will, it is none the less true that your success will be greater without them. There are, of course, a few exceptions; those are the cases where a child that cannot be induced to take other nourishment will take weak milk-punch or egg-nog.

VII.—Nourish the patient with an abundance of cold milk, given frequently, to which a little lime-water may often advantageously be added. This rule is of the greatest importance. Even a bad case may be regarded favorably while the patient continues to take nourishment well. When the stage of extreme exhaustion has been reached in bad cases, juice squeezed from beef-steak is valuable.

By perseverance in this plan of treatment, and by the strict avoidance of all topical applications, Dr. Billington claims to have treated nearly one hundred and fifty cases of diphtheria with a mortality of less than ten per cent. He also publishes corroborative letters from a New Brunswick physician, and says that during the last year he has adopted the plan of having the cases seen and the diagnosis verified by competent, disinterested, well-known witnesses.

**DILATATION OF THE URETHRA BY THE URINE ITSELF** (*The Medical Record*, January 12, 1878).—Towards the end of the last century, Brunninghausen recommended this method of dilatation, which he claimed to be more easy and simple than that by bougies. To practise it the patient must simply compress lightly the urethra behind the glans with his fingers whenever he wishes to urinate. The pressure must be such that the urine can only escape slowly and after having remained some time in the canal; as a necessary result the canal will be more or less dilated through its entire length, in the constricted as well as in the healthy portion. If this be repeated every time the urine is voided, the same effects will gradually be produced as if bougies had been used, while at the same time the inconveniences of the latter are avoided. M. Béranger-Férand has employed this method in his practice, and the following are the conclusions he has arrived at with regard to it:

1. Dilatation of the urethra by the urine, repeated at each urination for a long time after a prolonged attack of gonorrhœa, seems to prevent the formation of strictures.

2. In cases of moderate strictures it seems to have restored the normal calibre of the canal, or at least to have restored the calibre sufficiently to render micturition easy.

3. After the operation of urethrotomy it will perhaps prove useful to prevent, or at least to retard notably, the return of the constriction.

4. In cases of varicose dilatations at the neck of the bladder or in the membranous portion of the urethra, it appears calculated to be serviceable.

5. It seems to prove useful also in the cases of partial or total hypertrophy of the prostate in old men. In such patients the first drops of urine, which are emitted with so much difficulty and slowness, will serve effectually to fill the canal if the meatus be kept closed. When the ordinary calibre of the canal is once re-established in this way, the remaining contents of the bladder can be evacuated easily. The method has this great advantage, that it does away with the difficulty of emission after the first drops have escaped from the bladder; when it is not employed, the difficulty of emission persists during the entire act; the micturition, moreover, becomes intermittent, and the bladder is incompletely emptied, as a result of which, frequent desire to urinate is soon experienced.

**METHODS OF RENDERING THE FEMALE URINARY BLADDER ACCESSIBLE, AND OF PROBING THE URETER IN WOMAN** (*The Boston Medical and Surgical Journal*, January 10, 1878).—The steps for the accomplishment of dilatation of the urethra consist of three acts: *First*, the slitting of the margin of the urethral orifice, this being the narrowest and most unyielding part of the urethra. This is done by lateral incisions in the upper margin of one-fourth centimetre in depth, and one downward one-half centimetre in depth. *Second*, dilatation of the urethra with plugs. Hard-rubber plugs or plug-shaped specula should be used, as they give the force applied more equally and with less danger of tearing or bruising the mucous membrane at the narrowest points, as under the pubic arch. *Third*, the passing of the finger through the urethra into the bladder, and the examination of the interior of the latter. This is very much aided by using the forefinger for the examination, at the same time passing the middle finger into the vagina and, with the other hand above the pubes, pressing the fundus of the bladder down upon the exploring finger. The patient being anesthetized, all the above-mentioned three acts may be accomplished in a very few moments. The indications for this means of dilating the urethra are: 1. For the diagnosis of the diseases of the mucous membrane. 2. For the diagnosis of foreign bodies and stones, which can be found when they are very small. 3. For the extraction of such bodies. 4. For the purpose of applying strong caustics in cases of inveterate catarrh

of the bladder. 5. For the cure of fissures of the urethra. 6. For the diagnosis of defects in the vesico-vaginal septum when the vagina is closed. 7. For the diagnosis of the seat and extent of growth of tumors in the vesico-vaginal septum. 8. For the extirpation of tumors, especially of papillomas, starting from the mucous surface of the bladder. 9. For the discovery and subsequent extraction or excision of renal calculi from the vesical part of the ureter. 10. For the opening of hæmatometra, when puncture is impossible or too dangerous, between the bladder and the rectum; as, for instance, when there is a congenital deficiency of a part or the whole of the vagina. 11. For the cure of colo-vesical or entero-vesical fistula, by cauterizing the ostium vesiculi of the fistula.

The probing or catheterization of the ureter may be accomplished as follows. The urethra having been dilated, the finger is passed through it, and about one inch beyond the neck of the bladder it finds the ligamentum interuretericum, which is more prominent on either side than in the centre. About one-half to three-quarters of an inch from the median line, on the surface of this ligament, are the orifices of the ureters, which are imperceptible to the touch; and it is, therefore, necessary that this point of the ligament should be fixed with the finger, and the probe or catheter passed upon it upward and outward in the direction of the ligament. By slightly pushing, we try to introduce the probe into the orifice of the ureter. If it does not enter, it will be arrested by the walls of the bladder; but if it does it can easily be pushed on in an upward and outward direction, and we feel the probe covered, for a few centimetres, by mucous membrane.

**TREATMENT OF FRACTURE OF THE SHAFT OF THE FEMUR** (*The Saint Louis Medical and Surgical Journal*, January, 1878).—Dr. Edward Borck, after deprecating the use of any of the various long splint and extension apparatus which require a patient with fracture of the femur to be kept in a dorsal position, with the limbs straight and the shoulders low, describes his own method of treatment as follows. Put the patient on a firm mattress; elevate the foot of the bed three or four inches; elevate the shoulders also even as much as the semi-sitting posture; place the fractured thigh upon a double-inclined firm, yet soft, pillow, the foot against a board or pillow; the body and the leg will make all the extension and counter-extension needed. Sometimes it is necessary to place along the inside of the thigh, below the fracture, an adhesive strip, two and a half or three inches wide, forming a loop at the knee and running up again on the outside. A piece of plaster or bandage should encircle the limb to hold the strip in place; then fasten a post at the foot of the bedstead, not opposite the foot of the injured limb. If it is the right leg,

put it a little to the left of the median line from the umbilicus. A roller is fixed into the post, and a cord is fastened to the loop, which extends from the knee; the cord runs over the pulley in an oblique direction, and must pass on the inside of the great toe; a weight is hung to this of five or ten pounds, and is increased if needed; or, simply tie the cord to the post. Here the extension, if wanted, is direct from the thigh, and a great deal more force can be employed than from the leg, but, in general, it is not wanted. If the patient is very restless, employ splints of wood or reed, one-half to three-quarters of an inch wide, and the proper length, glued to strong cloth, properly and accurately fitted and buckled or pinned. One anterior and two side splints of felt or leather would answer. Dispense with the perineal band altogether.

### MISCELLANY.

**AN EPIDEMIC TRACED.**—Dr. Russell has just published a brilliant report on the epidemic of enteric fever which has been prevalent in the west end of Glasgow and the west end suburbs of Hillhead. In a picturesque situation, on the banks of the Avon, stands a farm, whose arrangements are such as to favor the contamination of the products of the dairy. In this farm a son sickened with enteric fever on December 1, a servant-girl on December 20, and another boy on December 27. The work of the dairy was carried on by persons who attended the patients. From this farm there were sent daily twenty-five gallons of milk to Messrs. Semple and Wilson of Hillhead, and they passed on eight gallons to Messrs. Morrison. The seventeen gallons retained were distributed to families in Hillhead and the west end of Glasgow, partly to wholesale and retail customers. The immediate result was an epidemic of enteric fever, almost entirely among the customers of Messrs. Semple and Wilson and Messrs. Morrison. The manner in which the disease picked out the persons using infected milk is most graphically shown by one or two examples appended by Dr. Russell, which we may quote:

"In Hill Street (Garnethill) there are seven families supplied with suspected milk, of whom three are infected, and a hundred and eighty-one supplied otherwise, not one of whom is infected. In Berkeley Terrace there is one family supplied with suspected milk, which is infected, and thirty-seven otherwise supplied, not one of whom is infected. In Royal Terrace there is one family supplied with suspected milk, which is infected, and twenty-eight which are otherwise supplied, not one of whom is infected. In Lynedoch Crescent there are two families supplied with suspected milk, of whom one is infected, and fifteen

otherwise supplied, not one of whom is infected. In Park Street East there are five families supplied with suspected milk, of whom one is infected, and twelve otherwise supplied, not one of whom is infected. In Park Circus there are nine families supplied with suspected milk, of whom two are infected, and twenty-seven otherwise supplied, not one of whom is infected. In Woodlands Terrace there are seven families supplied with suspected milk, of whom five are infected, and fourteen supplied otherwise, not one of whom is infected. In Park Gardens two families are supplied with suspected milk, one of whom is infected, and four supplied otherwise, not one of whom is infected. In Clairmont Terrace there are seven families supplied with suspected milk, of whom three are infected, and five supplied otherwise, not one of whom is infected. In Woodside Crescent there are four families supplied with suspected milk, one of whom is infected, and thirteen supplied otherwise, not one of whom is infected. Another area of infection is amongst the students of the University, who, on the 21st December, were dispersed over the country for their Christmas holidays. There are now some absentees from illness, and I have obtained the names of seven of these who have already been discovered to have enteric fever. Of that small number three are now dead,—at Kilwinning, at Langloan, and in Islay. The refreshment room in the University was supplied with milk by Semple and Wilson. It was largely patronized by the students, and those men are known to have partaken of the milk."

Dr. Russell may well remark that in this epidemic we have as clear an experiment performed for us as in any of the demonstrations of the chemist's laboratory.—*British Medical Journal*.

**EXCISION OF THE LARYNX.**—The man on whom Dr. Foulis of Glasgow performed the operation of excision of the larynx was exhibited at the meeting of the Medical Society of London, on Monday evening last. The artificial larynx, devised by Gussenbauer for the subject of Billroth's first operation of the kind, in 1873, was also shown. The apparatus used in Dr. Foulis's case is a modification of that of Gussenbauer. It consists of two tubes, one of which goes downwards to the trachea, and the other upwards to the mouth. The patient, we are informed, can talk in a whisper without these tubes; but when a reed-plate is slipped into a groove in the lower tube, a resonant sound is produced, which is modulated into letters and words by the mouth. The articulation with or without reeds is perfect. The reeds are made of metal, vulcanite, ivory, horn, etc., and the patient himself is fond of making reeds which give his voice new and surprising tones. The voice is a monotone, varying in *timbre* according to the reed used. The sound-waves

of the patient's voice on König's mirror were similar to those of other voices, as was shown by Mr. Ward with a mirror lent by Mr. Spottiswood.—*British Medical Journal*.

**SUICIDE OF AN ENGLISH DOCTOR.**—A short time ago, as Dr. Radcliffe, who was suffering from mental aberration, was being conveyed from Hassan Yoor to Tiflis, under the charge of a Russian military surgeon, he contrived to effect his escape and commit suicide. At the official inquiry held on the following day at the Tsalkanski Station, a district doctor stated that during the post-mortem examination he had extracted from the head of Dr. Radcliffe a rifle-bullet, which had penetrated the skull sufficiently deep to cause insanity, though not death. The injury had been inflicted while the doctor was attending the wounded on one of the battle-fields of Armenia.—*The Globe*.

**DOCTORS' BUTLERS.**—We heard an opinion expressed some few years since by an American, who had travelled to England for medical advice, and who, *more Americano*, had taken it tolerably freely in all quarters, that "the London doctors were a very nice set of men, but as for their butlers they were as proud as Lucifer." The *World* last week hinted that these haughty officials were often quite unmanageable without the intervention of the silver talisman, and that in many cases they were, as it were, the absolute proprietors of their masters' time. It is probable that our contemporary has made the most of the fact that servants are occasionally open to the influences of a "tip," but the subject is, nevertheless, one which is not unworthy of serious consideration. We should imagine that there ought to be no difficulty in so arranging to see patients that the butler should have very little chance of a voice in the matter. A doctor whose butler gets the upper hand may not unreasonably expect to see his practice dwindle.—*Lancet*.

THE following, according to an exchange, is the result of the measurement of over half a million of men as regards height and nativity. The mean height of the American Indian is 67.934 inches; the American white man, 67.672; Scotch, 67.666; English, 66.575; Russian, 66.393; French, 66.277; Mexican, 66.110.—*Boston Medical and Surgical Journal*.

## OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY FROM JANUARY 27 TO FEBRUARY 9, 1878.

WATERS, W. E., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at San Antonio, Texas. S. O. 17, Department of Texas, January 23, 1878.

PAULDING, H. O., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended three months. S. O. 19, A. G. O., January 26, 1878.

TURRILL, H. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty as Post-Surgeon at San Antonio, Texas. S. O. 17, c. s., Department of Texas.